

The animals associated with the *Megalonyx* are, an *Ursus*, a *Bos*, two species of *Cervus*, one or two species of *Equus*, and several undetermined genera, all which are now in progress of delineation and description for the Academy's Journal.

Dr. Dickeson presented another relic of yet greater interest, viz. the fossil *os innominatum* of the human subject taken from the above-mentioned stratum of blue clay, and about two feet below the skeletons of the *Megalonyx* and other extinct genera of quadrupeds.

This ancient relic of our species is that of a young man of about sixteen years of age, as determined by its size and form, and by the fact that the epiphyses have separated from the tuberosity of the ischium and from the crista of the ilium. Nearly all the *os pubis* is wanting, the upper posterior part of the ilium is broken away, and but half the acetabulum remains. That this bone is strictly in the fossil state is manifest from its physical characters, in which it accords in every respect of colour, density, &c. &c. with those of the *Megalonyx* and other associated bones. That it could not have drifted into the position in which it was found is manifest from several facts:—1. that the plateau of blue clay is not appreciably acted on by those causes that produce ravines in the superincumbent diluvial; 2. that the human bone was found at least two feet below three associated skeletons of the *Megalonyx*, all which, judging from the apposition or proximity of their several parts, had been quietly deposited in this locality, independently of any active current or other displacing power; and lastly, because there was no admixture of diluvial drift with the blue clay, which latter retains its homogeneous character equally in the higher part that furnished the extinct quadrupeds, and in its lower part that contained the remains of man. Dr. Dickeson has announced his intention of returning, at an early period of the present autumn, to resume his explorations in this prolific and most interesting locality; and it is earnestly hoped that his researches may lead to a further elucidation of this important question in science.

On the Mechanism which closes the Membranous Wings of the genus Locusta. By JOSEPH LEIDY, M.D.

The membranous wings or *alæ* of the locusts while at rest are folded up, like a closed fan, beneath the anterior pergamentaceous wings. These are opened or expanded by the contraction of appropriate muscles (*extensores alæ*) contained within the thorax, the tendons of which are inserted into the ribs or longitudinal veins at the root of the wings. When one of the wings is separated from the body of the insect and stretched open by the fingers, upon letting go it will be found instantly to close or resume the position of rest.

The mechanism which produces this closure in the separated wing, as well as when attached to the living animal, I find to be spiral ligamentous bands, wound, like the thread of a screw, around the transverse or connecting veins, which latter are also flexible. By this arrangement, upon the contraction of the alary extensors, the

spring-like ligaments, or ligamenta spiralia as I will call them, are stretched in the expansion of the wings, and upon the relaxation or cessation of the action of the muscles, the physical properties alone of the ligamenta spiralia, in resuming their unstretched state, close the wings. These ligamenta spiralia are numerous, and exist in all the species of *Locusta* possessing perfect alæ which I have examined. —*Proceedings of the Philadelphia Academy of Natural Sciences.*

ON THE GENUS CALOPTYLUM.

A mistake occurred in the notice which appeared in our last Number on this subject, the 'Annals' being referred to as the work in which Mr. Thompson's paper was published, whereas it should have been Charlesworth's 'Magazine of Nat. Hist.' vol. iv. p. 184. —ED.

METEOROLOGICAL OBSERVATIONS FOR JAN. 1847.

Chiswick.—January 1. Frosty: overcast. 2. Hazy and cold. 3. Dry haze: snow at night. 4. Cloudy. 5. Hazy. 6, 7. Foggy. 8. Hazy. 9. Cold: hazy. 10. Sharp frost at night. 11. Frosty: fine: sharp frost. 12, 13. Foggy. 14. Sharp frost: foggy: frosty. 15, 16. Dense fog: frosty at nights. 17. Dry haze: foggy. 18. Cloudy and cold. 19. Overcast: hazy. 20. Slight haze: snow at night. 21. Snowing. 22. Dense fog throughout. 23. Slight fog: cloudy: rain. 24. Densely clouded: rain: clear. 25. Fine: slight showers in the evening. 26. Partially overcast: fine: boisterous at night. 27. Clear: rain at night. 28. Boisterous: clear and frosty. 29. Fine, with sun: clear and frosty. 30. Clear and frosty: fine: densely overcast. 31. Light haze: cloudy: fine.

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| Mean temperature of the month | 34°·26 |
| Mean temperature of Jan. 1846 | 43·54 |
| Mean temperature of Jan. for the last twenty years ... | 36·81 |
| Average amount of rain in Jan. | 1·60 inch. |

Boston.—Jan. 1. Foggy: snow on the ground. 2, 3. Cloudy. 4. Cloudy: snow early A.M. 5. Cloudy: rain early A.M. 6. Cloudy. 7. Rain. 8—11. Cloudy. 12. Cloudy: rain P.M. 13. Cloudy. 14—16. Fine. 17—20. Cloudy. 21. Cloudy: snow P.M. 22. Cloudy: snow on the ground. 23. Cloudy. 24. Cloudy: snow nearly all melted. 25. Fine: rain midday. 26. Fine. 27. Windy. 28. Rain. 29—31. Fine.—This January has been the coldest since January 1842, and the driest since 1833.

Sandwick Manse, Orkney.—Jan. 1. Fog. 2. Cloudy. 3. Damp: showers. 4. Showers. 5. Showers: rain. 6, 7. Damp. 8. Cloudy. 9. Bright: clear. 10—12. Bright: frost: clear. 13. Bright: clear. 14. Bright: frost: clear. 15. Bright: clear. 16. Drops: cloudy. 17—19. Cloudy: clear: aurora. 20. Fine: frost: clear: frost: aurora. 21. Sleet-showers. 22. Bright: clear. 23, 24. Cloudy: rain. 25—27. Bright: clear. 28. Clear: frost: cloudy. 29. Bright: clear. 30. Bright: snow-showers: aurora. 31. Hail-showers: snow-showers: aurora.

Applegarth Manse, Dumfries-shire.—Jan. 1. Clear, but moist. 2. Dull and raw: slight snow. 3. Slight frost: very chilly. 4. Dull: slight frost: rain P.M. 5. Dull: rain. 6. Fine and fair. 7, 8. Fair, but cloudy. 9, 10. Frost: clear. 11—13. Frost, hard. 14. Frost, hard, but cloudy. 15. Thaw. 16. Thaw: drizzle. 17—21. Frost again. 22. Frost: snow: thaw. 23. Thaw: sleet. 24. Heavy rain. 25. Slight frost A.M.: rain. 26. Heavy rain. 27. Rain: cleared P.M. 28. Fair, but dull. 29. Slight frost A.M. 30. Slight frost A.M.: cloudy. 31. Hard frost: snow P.M.

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| Mean temperature of the month | 35°·97 |
| Mean temperature of Jan. 1846 | 43·0 |
| Mean temperature of Jan. for 25 years | 34·9 |
| Mean rain in Jan. for 20 years | 2·60 inches. |